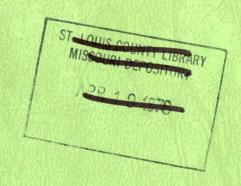
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ANNUAL REPORT.....1977

MISSOURI STATE HIGHWAY COMMISSION

MISSOURI STATE HIGHWAY COMMISSION

Jack Curtis, Chairman

Daniel W. Duncan, Vice-Chairman

Lynn W. Bauer, Member

W. R. Logan, Member

Roy W. Jordan, Member

A. C. Riley, Member

Robert N. Hunter, Chief Engineer

Bruce A. Ring, Chief Counsel

Irene Wollenberg, Secretary

Springfield

St. Joseph

Kansas City

Silex

St. Louis

New Madrid

Jefferson City

Jefferson City

Jefferson City

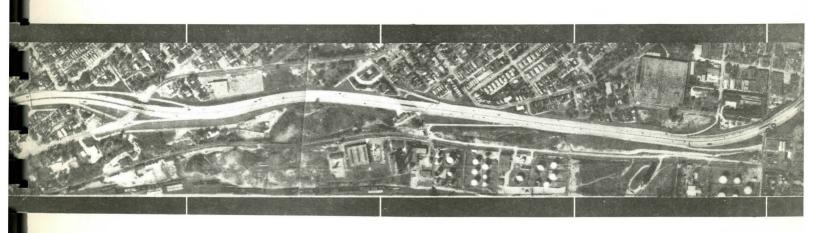
foreword

This annual report of the Missouri State Highway Commission contains information about the work accomplished, receipts, and expenditures of the Commission and its State Highway Department during calendar year 1977.

The intent of the report is to provide easy access to statistical information and to briefly convey the general functions of the several divisions of the State Highway Department.

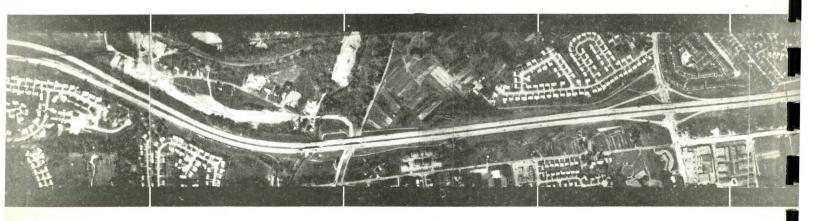
In discharging its responsibilities under Missouri law, the Commission looks to an informed and interested public as final arbiter of the operation and development of Missouri's highway program. That being so, copies of this report are available to the news media, and insofar as the number of published copies permits, to interested public officials and private citizens. As required by law, a copy of the report is being furnished to the Governor.

It is the sincere desire of the Commission that the information contained in this annual report will help to increase the general understanding of Missouri's highway administration. The Commission will welcome inquiries relating to this annual report.



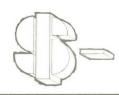


BASIC REVENUE:		
Motor Vehicle License	\$ 97,575,901.05	
Motor Bus & Truck Fees	\$ 1,828,459.00	
Motor Vehicle Use Tax	\$ 13,974,536.85	
Drivers' License Fees	\$ 4,432,188.27	
Motor Vehicle Inspection Fees	\$ 1,846,387.50	
Motor Fuel Tax Receipts	\$ 176,235,359.06	
		\$ 295,892,831.73
INCIDENTAL RECEIPTS:		
Refunds - Highway Fund	\$ 226,885.24	
Refunds - Road Fund	\$ 16,361,343.95	
Political Subdivisions	\$ 252,832.16	
		\$ 16,841,061.35
FEDERAL AID REIMBURSEMENT	\$ 134,714,841.00	\$ 134,714,841.00
MISCELLANEOUS ESCROW FEES	\$ 275,201.71	\$ 275,201.71
INTEREST RECEIVED - STATE ROAD FUND BALANCE	\$ 7,627,690.47	\$ 7,627,690.47
TOTAL RECEIPTS		\$ 455,351,626.26



disbursements (

GAS TAX REFUNDS



9,257,899.76

CONSTRUCTION \$ 246,119,156.17

MAINTENANCE 102,794,382.98

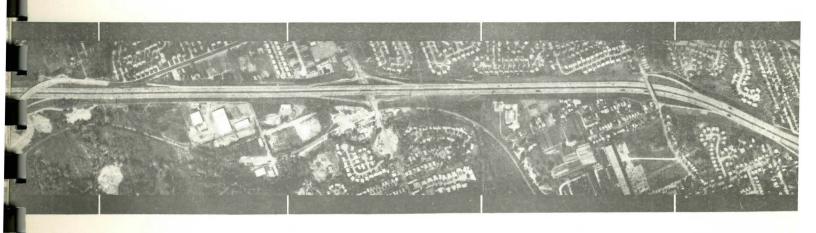
MISSISSIPPI RIVER PARKWAY COMM. 2,981.29

ADMINISTRATION 19,271,393.82

O.A.S.I. - HIGHWAY DEPARTMENT 4,208,808.36

OTHER STATE DEPARTMENTS 48,321,628.29

TOTAL DISBURSEMENTS \$ 429,976,250.67





accounting

The accounting and expenditure control for the State Highway Department is the direct responsibility of the Accounting Division. All of the Department's records of financial transactions are processed and recorded by this Division.

Based on anticipated revenues and disbursements, the Division prepares legislative budget requests as well as annual internal budgets.

The Division checks all payment documents for accuracy, priority of payment and to determine if funds are available prior to recording and certification for payment.

The Division processed 203,783 checks during 1977, which represents disbursements of \$372,396,722.62. Disbursements through Gas Tax Refunds and Other State Departments from Highway Funds equaled \$57,579,528.05. Total disbursements from Highway Funds for 1977 equaled \$429,976,250.67.

Payments for Workmen's Compensation and medical care are made by the Department's insurance carrier; however, these payments are routed through the Accounting Division and recorded to insure absolute accuracy of fiscal records. There were 723 Workmen's Compensation cases processed this year. Written procedures relative to the Workmen's Compensation Unit were initiated this year.

Various revisions were required in the Department's accounting procedures in order to accommodate the new State-wide Accounting for Missouri (SAM) accounting program inaugurated by the Office of Administration.

Many man-hours were required of accounting personnel to ascertain retirement prior service credit for many department employees for hour- and day-rate employment.

The Accounting Division was assigned the responsibility for the supervision of the Commission health and life insurance program and the Main Office Credit Union operation.

Payments to cities and counties on federally funded projects were changed from monthly to semi-monthly to facilitate reimbursement to these entities on a more timely basis.



bridges

This division is responsible for the design of all bridge structures constructed on the State Highway System.

During the year 104 designs were completed by this division. Of this number, 73 were designed for major system routes with 31 to be built on supplementary routes.

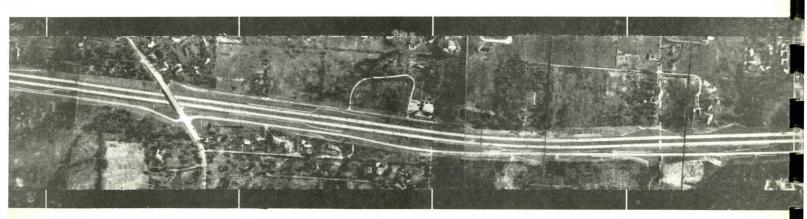
The total length of all new structures contracted for during the 1977 calendar year amounted to 30,350 feet at a cost of \$42,246,473. Of these amounts 9,716 feet costing \$11,697,405 were for supplementary routes.

Included in the above statistics are portions of two large structures. Substructure piers and 28 spans of superstructure steel was let to contract on a 3,177 feet structure to carry southbound Route I-44 in St. Louis City at a cost of \$4,939,599. Also let to contract was a portion of the superstructure work to complete the 3,792 feet Route I-70 bridge crossing the Missouri River at St. Charles at a cost of \$5,086,812.

In addition to the above, 49 designs were also prepared for repairing, widening or extending existing structures by contract at a cost of \$8,836,403.

In addition to designs for the state system our design services were offered to the counties for design of county road bridges under the Federal Highway Administration Off-System Program.

In addition to design work many hours were spent by personnel of this division on a program to rate the load carrying capacity of the older bridges on the State Highway System.





construction

Awards were made on 536 construction projects in 1977. This represents 2,313.591 miles of road construction. One hundred ninety-four projects included Federal-Aid, while 342 projects were financed entirely by State funds. The money value of the awards, including engineering and non-contractual costs, totaled 247 million. The breakdown is as follows:

Approximately 72 million dollars for the Interstate System.

Approximately 139 million dollars for the Primary System.

Approximately 31 million dollars for the Supplementary System.

Approximately 5 million dollars for non-contractual costs.

Total = 247 million dollars.

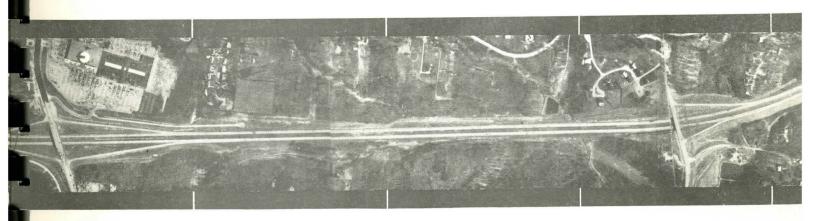
The Interstate System contracts involved new construction, upgrading existing dual facilities to Interstate standards, rest areas, highway beautification and implementing the latest safety features for highway traffic. Approximately 7 miles were completed to Interstate standards this year. There are now under construction approximately 49 miles of Interstate road. Missouri has 1,045 miles of Interstate roads up to Interstate standards and an additional 16 miles of Interstate roads in use as a dual facility but not up to the full standard.

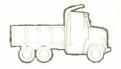
The primary and Supplemental System contracts include costs of construction work in rural and urban

areas and projects financed either with Federal-Aid or with 100% State funds. They include new construction, bridge replacements, widening, and highway beautification projects. Where applicable, the latest safety features were included.

Below is a resume of the projects under construction that have not been completed.

	Contracted	Contracted Contracted		TF 4 1	
System	in 1975	in 1976	in 1977	Total	
FEDERAL A	AID				
Interstate	1	27	37	65	
Primary	4	20	77	101	
Supplementar	y <u>0</u>	11	35	46	
Sub-Total (F	A) 5	58	149	212	
100% STATI	E				
Interstate	0	0	0	0	
Primary	0	15	61	76	
Supplementar	y <u>0</u>	_0	105	105	
Sub-Total (S	t.) 0	15	166	181	
GRAND TO	TALS 5	73	315	393	





equipment & procurement

This Division is responsible for procuring and maintaining a fleet of equipment that will efficiently and effectively permit the Department to carry out its functions. At the close of the year 1977 the Division was maintaining 6,302 rental units consisting of passenger cars, trucks, carryalls, tractors, mowers, motorgraders, and various miscellaneous units.

It required 8,188,737 gallons of gasoline, 278,661 gallons of kerosene, and 1,831,693 gallons of diesel fuel to operate the fleet. In addition, 43,798 gallons of anti-freeze, 112,719 gallons of lubricating oil, 45,827 gallons of hydraulic oil, and 111,153 pounds of multi-purpose gear oil and lithium grease were used. Tires and tubes costing \$544,959.00, tire chains costing \$28,314.43, and shop equipment, parts, and supplies totaling \$3,577,801.03 were contracted for during the year.

The Division is also charged with the responsibility of providing all tools, supplies, and

materials that are required in the operation of the Department. The quantities of the various materials purchased for use in the maintenance of the highway system are listed below:

Various Types of Asphalt	52,619,989	Gallons
Gravel	1,085,963	Cubic Yards
Stone and Chat	1,432,811	Tons
Paint	608,745	Gallons
Reflectorizing Spheres	3,241,200	Pounds
Sodium Chloride (Winter 1976-7	7) 89,009	Tons
Calcium Chloride (Winter 1976-7	77) 5,628	Tons
Treated Sign Posts	24,148	Each
Steel Sign Posts	22,924	Each
Grader and Maintainer Blades	1,220,179	Pounds
Agricultural Seed	63,200	Pounds
Mower Parts	\$260,709.90	

The Headquarters Sign Shop produced a total of 114,398 signs and markers of various shapes and sizes amounting to \$1,497,159.67 during the year.



legal

During the year 1977, this office instituted 37 separate proceedings in the circuit courts of the state for the condemnation of right-of-way for the state highway system. These cases involved the acquisition of a total of 201 separate parcels of land. A total of 319 condemnation cases were disposed of during the year and appellate court decisions were rendered in 21 cases involving the State Highway Commission.

In the condemnation cases disposed of, a total refund of \$878,788.64 was received by the Commission as the difference between the final judgment and the amount originally awarded by the condemnation commissioners.

There were 10 court actions filed to recover for damages to Commission-owned property, 10 actions filed for the enforcement of the Beautification Law pertaining to the screening of junkyards and 21 actions filed to obtain injunctions for possession of Commission property and various other reasons.

Nine pending actions involving the Beautification Law pertaining to junkyards were disposed of by obtaining compliance with the statute by the junkyard owners, and there were 58 instances in which this office obtained compliance with the

statute by junkyard owners without the necessity of instituting court action.

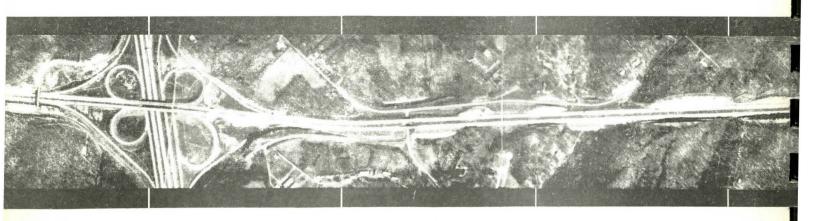
During the year, a total of \$488,807.56 was collected for damage to Commission-owned property involving 2,041 separate claims.

There were 3 administrative hearings conducted pertaining to relocation assistance benefits for persons displaced because of property acquisitions for highway construction and 8 administrative hearings conducted pertaining to the relocation or alteration of utility facilities to permit highway construction.

There were 85 petitions filed by outdoor advertising sign owners to review administrative decisions of the Commission relating to enforcement of the statutes pertaining to outdoor advertising signs adjacent to the interstate and primary highway system.

Thirty-one cases were filed in court against the Commission involving matters such as actions on contracts, inverse condemnation and injunction proceedings.

In addition to the litigation handled by this office, contracts to which the Commission was a party were prepared and approved by this office.



maintenance & traffic



During 1977, the total mileage of roadway maintained by the Division increased by 64 miles to a total of 33,732. This figure includes recreational access, outer roadways, service roads, and maintenance agreement mileage.

Major material items used in the routine maintenance of this mileage include approximately 52,620,000 gallons of asphalt and approximately 2,130,800 cubic yards of aggregate.

Major items of maintenance include 981 miles of surface leveling course, and 258 miles of roadway seal coats by contract, approximately 386,000 acres of mowing, 1,000,000 cubic yards of routine patching and an expenditure of \$1,163,982.00 on litter control.

Expenditures for snow and ice removal during the 1976-77 winter season were \$12,100,637.00 or approximately \$3,796,000.00 higher than the previous winter. The increased cost was partly due to a very severe winter season statewide. Approximately 250,000 cubic yards of abrasives and 94,400 tons of chemicals were used during this period.

Division personnel made inspections of all State maintained bridges to determine their condition and the need for repairs. This inspection included approximately 6,400 bridges on the State Highway System, 34 of which are Missouri or Mississippi River Crossings. Seventeen of the structures are jointly maintained with the adjacent State.

Division repair crews completed structural repairs to 65 bridges during the year. Six structures were repaired because of collision damage. Division paint crews completed painting 137 structures.

Plans were completed for landscaping Route 24, Jackson County in the vicinity of the Truman Library. During 1977, landscaping and/or screening of three maintenance lots was completed.

Contracts were let for spraying 6,442 acres of Johnson grass, 3,423 acres were fertilized by contract during the year. Roadside work by maintenance forces included application of herbicides to 21,053 acres and seeding of 108,400 pounds of various kinds of seed.

82,198 special permits were issued during 1977, of this total 27,321 or 33% were issued by the 10 district offices. Included in the total were 1,748 special permits issued to governmental subdivisions

or agencies without charges. A total of \$402,250 was collected for the permits issued.

Maintenance contracts were let for signalization of 6 intersections and 2 fire station entrances. Six intersections were signalized by maintenance forces. Modernization by maintenance forces of traffic control equipment was accomplished at 13 signalized installations. Signals were installed at 5 intersections by permit.

The programs to bring all department owned traffic signals on State highways into compliance with 1971 MUTCD and to interconnect various traffic signals for traffic progressions were continued.

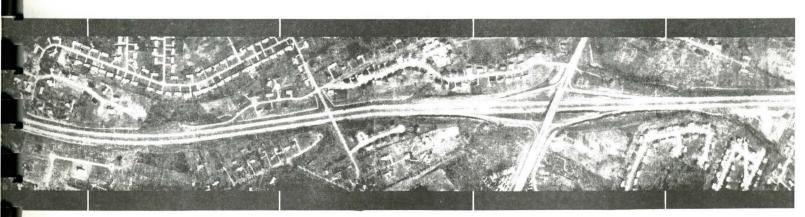
During the past calendar year we received 165,400 accident reports that were analyzed to determine those accidents that occurred on a State highway system. Of this number, 67,000 reports were found to be on system and were coded and placed in the accident data record system. These reports were provided by the State Highway Patrol and approximately 481 city and county law enforcement agencies. In addition, 550 collision diagrams were prepared and accident data tabulated. The 120/Medium Improvement Program was continued. 97 locations were investigated and corrective measures implemented at 71 of these locations.

Speed studies were conducted at 201 locations and traffic volume counts were made at 226 locations.

Six locations were investigated and countermeasures evaluated for possible funding under Section 209 of the 1973 Federal Aid Highway Act. Of these locations investigated, 2 projects were approved and programmed on the Five Year Right-of-Way and Construction Program.

The Formalized Freeway Surveillance Program in the St. Louis and Kansas City metropolitan areas continued with periodic monitoring of peak hour operations on the 170 mile system. Congested sections were pinpointed, subjected to additional investigation, and ranked in order of congestion severity. Detailed engineering studies of the most critically congested sections were initiated to isolate the cause of congestion and to evaluate alternate countermeasures to improve operational efficiency.

The Striping Program for the year consisted of a total of 69,400 miles. This total includes the



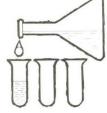
striping of 38,500 miles of centerlines and lane lines, 20,300 miles of edgelines and 10,600 miles of no passing zone lines. To complete this work a total of 497,800 gallons of paint and 2,453,800 pounds of reflectorized glass beads were used.

469 billboards were removed by property owners and 45 were removed by State forces under the Outdoor Advertising Laws and Regulations.

Activities funded with 402 Program funds under the 3+ Standards of Missouri's Highway Safety Annual Work Program as coordinated by the State Highway Department were as follows:

 High accident location surveillance equipment purchased included television and conventional equipment for the cities of Kansas City, Springfield, and St. Louis County as well as equipment utilized by State Highway Department personnel. A total of \$36,000.00 was devoted to this project.

- Replacement parts for existing impact attenuator installations on the State Highway System were purchased at a cost of approximately \$35,000.00. The parts are being used in the St. Louis and Kansas City areas.
- The Traffic Engineering Assistance Program continued with 171 studies being completed Statewide. 211 Bridge Engineering Assistance Program studies were also completed. Both the Traffic and Bridge studies are averaging about \$1,000.00 per study.
- Short courses, seminars, and workshops sponsored during the year included Traffic Signal Workshop, The 28th Annual Traffic Conference, and The Annual Highway Safety Engineering Committee Meeting.



materials and research

The Materials and Research Division determines the quality standards for materials that will provide the maximum performance in highway construction at the most economical cost, conducts field and laboratory tests to insure that all materials meet the specified standards, conducts research investigations on new materials, pavement design, or roadway foundations. The Division designs the asphaltic concrete and Portland cement concrete mixtures for highway purposes.

Roadway foundation investigations included 124 bridge foundation subsurface explorations. Six bridge deck condition surveys were conducted and reported.

Major research projects completed and reported during the year were "Evaluation of a One Point Compaction Test for Missouri Soils" and Phase III of "Investigations of D Cracking in PCC Pavements."

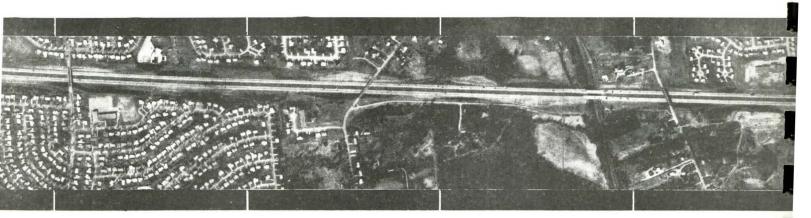
Principal purchases of testing equipment included a Salt Fog Cabinet and Weatherometer to study accelerated weathering and corrosion characteristics of paints and signing materials; a Jaw Crusher and Centrifugal Ball Mill to use for the artificial reduction of certain materials to comply with sample fineness requirements; a Mechanical Convection Oven for use in drying soil samples; and

an Infra-Red Spectrophotometer to be used in the identification of certain highway materials.

The quantities of various materials inspected, tested and approved for 1977 included:

Aggregates	8,785,005	Tons
Cement	442,167	Tons
Reinforcing Steel	26,397	Tons
Culvert Pipe		
Corrugated Metal.	106,344	Linear Feet
Vitrified Clay & Concrete	137,181	I 'r Feet
Joints - Bituminous, Fiber		
and Metal	330,5	eur Feet
Joints - Rubber	12.72	quare Feet
Guardrail	154.0	Linear Feet
Posts, Metal	64 - 18	Each
Lumber and Square Posts	624,218	Board Feet
Piling and Round Posts	23,295	Linear Feet
Bituminous Material		
Cutback and Penetration	66,775,104	Gallons
Emulsified	22,822,919	Gallons
Paint	422.921	Gallons

The grand total of samples tested in the Laboratory during 1977, including those of an experimental or investigational nature, amounted to 30,448.



personne

The Personnel Division processed numerous transactions throughout the year related to the Departmental services of the credit union, insurance programs, telephone system, and mailing activities.

The Personnel Division revised and reissued several personnel management publications during the year.

The Personnel Division reviewed all personnel transactions to ensure conformance to applicable personnel policies. Representatives of the Division served in an advisory capacity to staff and line supervisors on personnel transactions involving revisions and interpretation of personnel policy.

The Co-Operative Civil Engineer Training Program, conducted by the Missouri State Highway Department in cooperation with the University of Missouri-Columbia and Rolla campuses, currently has 15 participants. The program alternates academic and work phases, combining academic studies with progressive and varied job assignments. The program requires five years to complete and has provided a valuable source of trained civil engineer graduates for permanent employment with the Department.

On December 31, 1977, the Department had 6,573 salaried employees. This represents a net decrease of 2 employees under 1976. Wage employees vary according to seasonal needs and emergency maintenance requirements and are not reflected in the number of salaried employees as presented above.

right of way

During 1977, the cost of right-of-way acquired for highway construction totaled \$16,452,782.

The Division acquired 767 parcels - 588 by negotiated settlement and 179 by condemnation or 77 percent by negotiation and 23 percent by condemnation.

Payments totaling \$673,741.60 were made in 1977 under the Relocation Assistance and Payment Program to assist displaced families, business and farm operations in relocating. During the year 497 relocation claims were processed and paid.

During the year, the Right-of-Way Division obtained appraisals for 1,090 parcels. Two separate

The Personnel Division conducted an on-campus recruiting program at universities in Missouri during the Fall and Spring academic semesters.

In March, 1977, an on-campus supervisory training seminar was provided to 33 Department supervisors. The Personnel Division coordinates curriculm and arrangements for the program with the University of Missouri-Columbia faculty.

Job investigations were conducted throughout the year by the Personnel Division when new jobs were established and existing jobs had significant changes in content.

A minority recruitment program is conducted throughout the year. The state-wide program designed to provide assistance in locating sources for minority applicants, was conducted by Personnel Division representatives. Progress reports of minority employment are regularly reviewed and recruiting assistance provided based upon these results, along with special requests for assistance in filling particular openings.

During the year, Personnel Division employees represented the Department at various job career days.

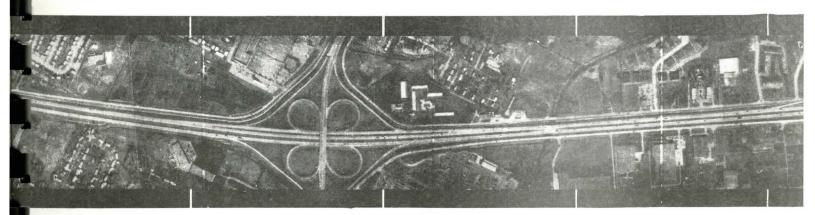
The Personnel Division processed 130 retirement requests during 1977. Sixty-seven elected to retire at age 60 years with 15 years service; 25 qualified for disability benefits; 23 retired between the ages of 65 and 70; and 15 retired at age 55 with 15 years service. The Highway Employees' and Highway Patrol Retirement Program is currently paying benefits to 1,560 Highway Department retirees.

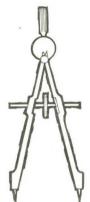
appraisals were prepared for 28 percent of the parcels involved, making a total of 1,396 appraisals produced. An average of 91 parcels were appraised each month, which required an average production of 116 separate appraisals per month.

Receipts from the sale of improvements located on right-of-way acquired for highway construction and from the sale of excess property totaled \$898,273.87.

Rental of advance acquisitions and excess property resulted in an income of \$72,055.60. An additional \$137,352.60 was derived from miscellaneous sources.







planning

The Division of Planning is responsible for gathering and maintaining data relative to the State Highway System. The data is utilized in establishing transportation objectives, formulating long range plans and developing improvement programs.

During the past year, studies were conducted in many fields involving traffic patterns, financial trends and highway needs.

Special traffic study reports were published for six selected cities and travel pattern surveys conducted in six additional cities. Traffic and vehicle classification counts were taken in over 4400 locations throughout the state. Special speed studies were made throughout the year to monitor vehicle speeds on the highway system.

The Division of Planning continued to update the physical and geometric data for all roads and bridges in the State Highway System. Service ratings were published evaluating the condition, safety and service of the Supplementary System and all state highway structures.

In the state's five urbanized areas, comprehensive evaluations of transportation needs were conducted through the cooperative, comprehensive and continuing planning process. This transportation planning process includes the input of the local elected officials and the Metropolitan Planning Organizations.

The Division continued to study trends of income and expenditures. The financial trends are

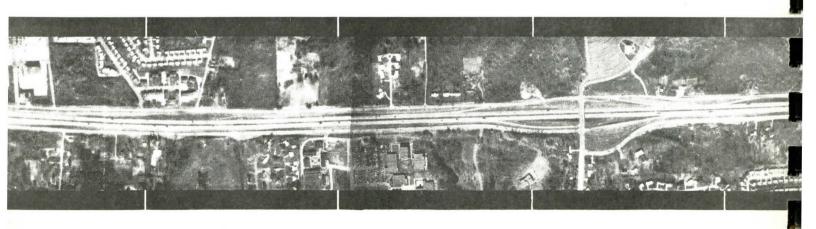
closely observed in developing the State Highway Department's Five-Year Right-of-Way and Construction Program. This program included some 1,165 individual improvement projects.

Another function of the Division of Planning is compiling and updating various maps. The past year's effort concentrated on printing and distributing 1,110,000 Official State Highway Maps; updating 16 county maps and 38 city maps.

As of December 31, 1977, the State Highway System of Missouri involved 32,106 miles, as shown by the following table.

STATUS OF THE STATE HIGHWAY SYSTEM AS OF DECEMBER 31, 1977

SYSTEM	ROAD MILES
Interstate	1,081.102
Primary	6,835.697
Supplementary	24,189.627
TOTAL MILES	32,106.426
TYPE	
Oiled Earth	0.000
Granular	12.196
Low Type Bituminous	25,093.222
High Type Bituminous	4,004.582
Concrete	2,996.426
TOTAL MILES	32,106.426



public information



Missourians from all walks of life continued during 1977 to show a high degree of interest and involvement in highway matters. Because they did, the Public Information Division continued during the year to disseminate information about almost every facet of highway planning, building, and systems operation.

A continuous flow of information about the highway program was maintained throughout the year. News releases, radio programs, and graphic displays were among the means prominently used to maintain the flow. Public Information Division personnel were in almost continuous contact with members of the state's news media, to whom extensive information was distributed--both routinely and in response to special requests.

During the year, members of the Division prepared and distributed more than 500 news releases. In addition, numerous special articles, feature stories, and photographs were supplied to newspapers, magazines, and other publications.

The Division also published and distributed MISSOURI HIGHWAY NEWS, whose circulation at year's end approached 9,000 copies per month.

Fifty-two radio programs were produced and distributed to about a hundred commercial broadcasters throughout Missouri.

Speeches were prepared for presentation by Highway Department officials from the Headquarters

Office and the several Districts. The Division also prepared and published the Highway Commission's Annual Report and Biennial Report.

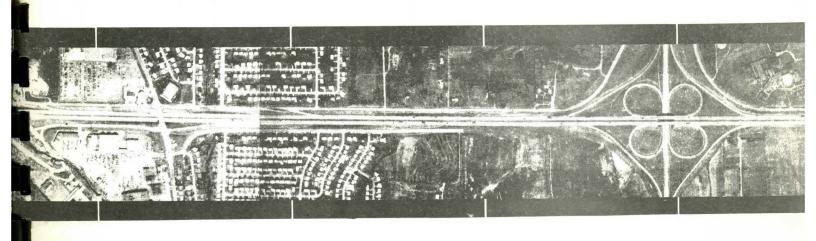
A clipping service was maintained to keep Commission members and Department officials informed about newspaper coverage of and comment on highway affairs. Daily compilations were made from all newspapers in the state, and information also was collected to provide data on traffic study needs, to supply financial data from the county and city levels for Planning Division studies, and to record details of traffic fatalities.

The annual Highway Gardens exhibit at the Missouri State Fair was seen by more than 300,000 people.

About 250 mail and telephone requests per month were answered by Division personnel. These requests involved, among other things, maps, road information, historical information, routings, educational materials, and films.

The annual service awards program for employees with 25 to 45 years of service also was conducted.

The Division also supervised the distribution of about 1.1 million highway maps during the year, and the Highway Department's technical library functioned as a part of the Division.





surveys and plans

During calendar year 1977, construction projects totaling \$236,805,077.11 were placed under contract.

These contracts consisted of 223 projects totaling approximately 539 miles on the Interstate, Primary and Secondary Systems.

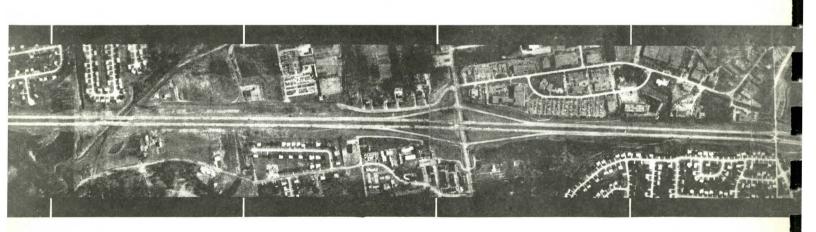
An additional \$17,563,909.43 in Maintenance Contracts were also awarded during calendar year 1977.

There were 11 bid lettings during the year with an average of 4.23 bids received per project.

There were 55 projects on which bids were rejected in 1977. The bids received averaged 4.9 percent under the project estimates.

The 1977 Average Composite Cost Index (1967 = 100 Base) decreased to 199.0 which is 1.9% under the 202.9 index average of 1976.

	Awards	Miles	Projects
Interstate System	\$ 87,630,446.08	84.980	50
Primary System	94,646,960.95	318.668	94
Supplementary	54,527,670.08	135.557	
Total: Construction by Contract	\$236,805,077.11	539.205	223
Maintenance Work by Contract	\$ 17,563,909.43	1709.228	269



CONSTRUCTION AWARDS

1977 Calendar Year

(Right-of-Way Costs - Not Included)

	No. Of	Length	Const. Cost	Non-Contr. Cost	
System	Projects	Miles	(+10%)	(+10%)	Total
Interstate-* Urban	24	27.164	62,457,771.65	280,563.96	62,738,335.61
Interstate-Rural	26	57.816	24,756,911.32	135,199.15	24,892,110.47
Interstate-Total	50	84.980	87,214,682.97	415,763.11	87,630,446.08
Primary-* Urban	18	27.561	13,505,819.12	677,645.54	14,183,464.66
Primary-Rural	76	291.107	79,581,031.04	882,465.25	80,463,496.29
Primary Total	94	318.668	93,086,850.16	1,560,110.79	94,646,960.9
Supplementary-*Urban	31	38.475	20,577,441.04	219,050.88	20,796,491.9
Supplementary-Rural	48	97.082	33,136,543.95	594,634.21	33,731,178.1
Supplementary-Total	79	135.557	53,713,984.99	813,685.09	54,527,670.0
GRAND TOTAL	223	539.205	234,015,518.12	2,789,558.99	236,805,077.1
		ALTERNATE	E ANALYSIS		
Interstate-* Ur ban	24	27.164	62,457,771.65	280,563.96	62,738,335.6
Primary-* Urban	18	27.561	13,505,819.12	677,645.54	14,183,464.6
Supplementary-* Urban	31	38.475	20,577,441.04	219,050.88	20,796,491.9
Total Urban	73	93.200	96,541,031.81	1,177,260.38	97,718,292.1
Interstate-Rural	26	57.816	24,756,911.32	135,199.15	24,892,110.4
Primary-Rural	76	291.107	79,581,031.04	882,465.25	80,463,496.2
Supplementary-Rural	48	97.082	33,136,543.95	594,634.21	33,731,178.1
Total Rural	150	446.005	137,474,486.31	1,612,298.61	139,086,784.9
GRAND TOTAL	223	539.205	234,015,518.12	2,789,558.99	236,805,077.1

